

AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheet(s)" of drawings include(s) changes to Figures 2, 5, and 7. The attached "Replacement Sheets," which include Figures 1-7, replace the original sheets including Figures 1-6.

REMARKS

Claims 9-12 are now pending in the application. Claims 1-8 have been canceled. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

The drawings stand objected to for certain informalities. Applicants have attached revised drawings for the Examiner's approval. In the "Replacement Sheets", Figure 2 is now labeled as 'Prior Art', Figure 5 is amended to include non-foreign language and more clearly identify the described angles, and Figure 7 is added. Support for this new Figure 7 can be found in the originally filed specification and accompanied drawings. Favorable consideration is respectfully requested.

SPECIFICATION

The specification stands objected to for certain informalities. Applicants have amended the specification according to the Examiner's suggestions. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed. It should be noted that by way of the present amendment, Claims 1-8 have been cancelled without

prejudice or disclaimer of the subject matter contained therein. Reconsideration and withdrawal of the present rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by DE 1118959. This rejection is respectfully traversed.

At the outset, Applicants wish to note that Claims 1-8 have been cancelled by way of the present Amendment, thereby rendering this rejection moot. However, in the interest of advancing prosecution, Applicants offer the following comments in connection with the currently pending claims.

Newly-added Claim 9 is directed to a mixing device having at least two rotating shafts with at least two opposite rows of blades disposed on each shaft. Each row of blades consists of at least two individual blades, which blades are fastened to the shaft at an angle of incidents α to the longitudinal axis of the shaft. The blades themselves are curved in the way that at the far end of the blades with respect to the fastening point the blade forms an angle of incidents β to the longitudinal axis of the shaft which is equal to or less than the angle of incidents α at the fastening point on the shaft. Furthermore, when starting from the fastening point of the blades on the shaft and extending to the far end of the blades, the angle of incidents α with respect to the longitudinal axis of the shaft continuously decreases to the smaller angle β .

However, in contrast, the DE 1118959 reference fails to teach or suggest that “the blades themselves are curved, so that the blades (12a, ..., 13a, ..., 13m) exhibit the angle of incidents α at the fastening point on the shaft (11, 14) and an angle of incidents

β to the longitudinal axis of the shaft (11, 14) at an outer diameter of the blades (D_A) such that the angle of incidents β at the outer diameter of the blade (D_A) is equal to or less than the angle of incidents α at the shaft diameter (D_W), and that the angle of incidents α continuously decreases from the shaft diameter (D_W) to the angle of incidents β at the outer diameter of the blade (D_A)” as claimed in Claim 9 and similarly claimed in Claims 11 and 12.

The DE '959 reference merely teaches blades mounted to a shaft that extend at a single incident angle, without meeting the specific claimed limitations. As described in the specification, it is the combination of increasing diameter (D_W to D_A) and the continuously decreasing angle of the incidents with respect to the longitudinal axis of the shaft which enables the homogeneous speed distribution over the whole mixing device. There is no disclosure in the cited state of the art, which is directed to the problem of the homogeneous speed distribution over the mixing device diameter. However, this homogeneous speed distribution is essential for some of the processes the claimed mixing device is intended to be used in. As stated in the English version of the specification on page 2, second to the last paragraph, it is the object of the invention to improve conventional mixing devices such that the material to be processed is transported at essentially the same speed irrespective of the radial distance thereof from the rotational axis of the shaft. The prior art is silent in this regard.

For these reasons, Applicants submits that the DE '959 reference fails to teach or suggest the claimed invention. Reconsideration and withdrawal of the present rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonnell (U.S. Pat. No. 2,017,116). Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Oda (U.S. Pat. No. 4,344,692). These rejections are respectfully traversed.

At the outset, Applicants wish to note that Claims 1-8 have been cancelled by way of the present Amendment, thereby rendering these rejections moot. However, in the interest of advancing prosecution, Applicants offer the following comments in connection with the currently pending claims.

In addition to the argument set forth above, Applicants submit that Bonnell and Oda, like the DE '959 patent fail to teach or suggest that “the blades themselves [being] curved, so that the blades (12a, ..., 13a, ..., 13m) exhibit the angle of incidents α at the fastening point on the shaft (11, 14) and an angle of incidents β to the longitudinal axis of the shaft (11, 14) at an outer diameter of the blades (D_A) such that the angle of incidents β at the outer diameter of the blade (D_A) is equal to or less than the angle of incidents α at the shaft diameter (D_W), and that the angle of incidents α continuously decreases from the shaft diameter (D_W) to the angle of incidents β at the outer diameter of the blade (D_A)” as claimed in Claim 9 and similarly claimed in Claims 11 and 12.

Bonnell and Oda merely teach blades generally straight blade that fail to meet the specific claimed limitations. As such, Bonnell and Oda are unable to achieve homogenous speed distribution over the mixing device diameter like that claimed in the present application due to their non-varied blade segments.

For these reasons, Applicants submits that the DE '959 reference fails to teach or suggest the claimed invention. Reconsideration and withdrawal of the present rejection are respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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